

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

What is claimed is:

1. [original] An in vitro method of predicting the association of a test agent with zone 3 necrosis, comprising:
 - a) determining the level of expression of each of the genes listed in Table 5 in a cell exposed to said test agent;
 - b) comparing said level of expression to the level of expression of said genes in a control population exposed to at least one control agent;
 - c) identifying a statistically significant alteration in the level of expression in the presence of the test agentwherein, if present, said alteration indicates that said test agent is predicted to be toxic.
2. [original] The method of claim 1, wherein said level of expression is determined by detecting a gene transcript.
3. [original] An in vitro method of predicting the association of a test agent with zone 3 necrosis, comprising:
 - a) determining the level of expression of each of TOXMARKER 42, 59, 65, 66, 71, 76, and 97 in a cell exposed to said test agent;
 - b) comparing said level of expression to the level of expression of said genes in a control population exposed to at least one control agent;
 - c) identifying a statistically significant alteration in the level of expression in the presence of the test agentwherein, if present, said alteration indicates that said test agent is predicted to be toxic.
4. [original] The method of claim 3, wherein said level of expression is determined by detecting a gene transcript.

5. [original] An *in vitro* method for the prediction of the association of a test agent with zone 3 necrosis, comprising:
 - a) contacting a cell with a test agent;
 - b) evaluating the level of expression of at least five TOXMARKER genes listed on Table 5
 - c) comparing said level of expression of those genes recited in step (b) to the level of expression of said genes in a control population exposed to at least one control agent;
 - d) identifying from the comparison in step (c) an statistically significant alteration at a p-value of least 0.05, in expression levels of said TOXMARKER genes in the presence of the test agent,wherein said alteration indicates that said agent is predicted to be toxic.
6. [original] The method of claim 5, wherein said level of expression is determined by detecting a gene transcript.
7. [original] An *in vivo* method of predicting the association of a test agent with zone 3 necrosis, comprising:
 - a) providing a cell from a subject exposed to said test agent
 - b) determining the level of expression of each of the TOXMARKER 42, 59, 65, 66, 71, 76, and 97 in said cell;
 - c) comparing said level of expression to the level of expression of said genes in a control population exposed to at least one control agent;
 - d) identifying a statistically significant alteration in the level of expression in the presence of the test agentwherein, if present, said alteration indicates that said test agent is predicted to be toxic.
8. [original] The method of claim 7, wherein said level of expression is determined by detecting a gene transcript.

9. [original] A method for screening for changes in gene expression associated with a toxic agent, comprising:
- a) determining the level of expression of each of the genes listed in Table 5 in a cell exposed to a test agent;
 - b) comparing said level of expression to the level of expression of said genes in a control population exposed to at least one control agent;
 - c) identifying a statistically significant alteration in the level of expression in the presence of the test agent
- thereby screening for changes in gene expression associated with a toxic agent.
10. – 11. [canceled]
12. [new] A method of predicting the association of a test agent with zone 3 necrosis, comprising:
- a) determining the level of expression of TOXMARKER 71 in a cell exposed to said test agent;
 - b) determining the level of expression of at least one TOXMARKER selected from the group consisting of TOXMARKERS 1-70 and 72-132 in said cell;
 - c) comparing the level of expression in said cell of TOXMARKER 71 and the TOXMARKER(s) selected in step (b) to the level of expression in a control population exposed to at least one control agent; and
 - d) identifying a statistically significant alteration in the level of expression in the presence of the test agent,
- wherein, if present, said alteration indicates that said test agent is predicted to be toxic.
13. [new] The method of claim 12, wherein the TOXMARKERS selected in step (b) are TOXMARKERS 42, 59, 65, 66, 76 and 97.
14. [new] The method of claim 12, wherein said level of expression is determined by detecting a gene transcript.